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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
FREEMAN, JOHN D	

ART UNIT	PAPER NUMBER
1787	

NOTIFICATION DATE	DELIVERY MODE
05/11/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/574,265	MUTSUDA ET AL.	
	Examiner	Art Unit	
	John Freeman	1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-14,19 and 22-24* is/are pending in the application.

4a) Of the above claim(s) *22-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-14 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. Claims 1, 4-6, 8-14, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikuta et al. (US 2003/0118839).

2. Regarding claim 1:

3. Ikuta discloses a composite comprising a thermoplastic resin part bonded to a rubber part [0001]. The thermoplastic part includes polyamide resins [0036].

4. Corresponding to presently claimed non-urethane resin (Ib-1), the polyamide resin includes alicyclic polyamides [0040]. The terminal groups can be up to 100% amino groups [0044]. The examiner submits the resin taught by Ikuta intrinsically has a terminal amino group concentration greater than 15 mmol/kg as presently claimed because 100% of the terminal ends can be amino groups and the polymer is otherwise the same as presently claimed.

5. The rubber part includes urethane-based rubbers [0081]. Such urethane rubbers include polyester-based urethane elastomers and polyether-based urethane elastomers [0086]. Ikuta discloses such elastomers are thermoplastic [0067].

6. Regarding claims 4-6:

7. The alicyclic polyamide resin includes an aliphatic and alicyclic diamine component [0040].

8. Regarding claim 14:

9. The rubber part includes polyester-based urethane elastomers and polyether-based urethane elastomers [0086].

10. Regarding claim 19:

11. There is no disclosure in Ikuta that the composite is for a shoe or roll. However, the recitation in the claims that the molded composite is "a shoe member or a roll member" is merely an intended use. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

12. It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. a composite used in a shoe or roll member, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure which is a composite identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

Claim Rejections - 35 USC § 103

13. Claims 1, 7-14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuta et al. (US 2003/0118839).

14. Regarding claim 1:

15. Ikuta discloses a composite comprising a thermoplastic resin part bonded to a rubber part [0001]. The thermoplastic part includes polyamide resins [0036].

16. Corresponding to presently claimed non-urethane resin (Ib-2), the thermoplastic polyamide resin can include a vulcanization auxiliary, which includes an oligomer polyamide having a number-average molecular weight of up to about 1000 [0108].

17. It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson,* 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch,* 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller,* 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be

obtained for the claimed critical range." *In re Geisler,* 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re Antonie,* 559 F.2d 618, 620 (CCPA 1977)).

18. At the time of the invention, it would have been obvious to one of ordinary skill in the art to increase the molecular weight of the polyamide oligomer, including to values within the presently claimed range, to adjust the processing properties of the resulting polymer.

19. The examiner submits the resin taught by Ikuta intrinsically has a terminal amino group concentration greater than 15 mmol/kg as presently claimed because 100% of the terminal ends can be amino groups and the polymer is otherwise the same as presently claimed.

20. The rubber part includes urethane-based rubbers [0081]. Such urethane rubbers include polyester-based urethane elastomers and polyether-based urethane elastomers [0086]. Ikuta discloses such elastomers are thermoplastic [0067].

21. Regarding claim 7:

22. Corresponding to presently claimed non-urethane resin (Ib-1), the polyamide can be the result of reacting an aliphatic dicarboxylic acid and an alicyclic diamine [0040]. Therefore, when faced with a mixture, one of ordinary skill in the art would be motivated by common sense to select a 1:1 ratio, a ratio that falls within the presently claimed amount, absent evidence of unexpected or surprising results. Case law holds that "[h]aving established that this knowledge was in the art, the examiner could then properly rely... on a conclusion of obviousness, 'from common knowledge and common sense of the person of ordinary skill in the art within any specific hint or suggestion in a particular reference.'" *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969).

23. Regarding claims 8 and 13:

24. The thermoplastic can include the oligomer as previously explained, thus meeting the requirement of presently disclosed (Ib-2).

25. Regarding claim 9:

26. Given that Ikuta teaches the polyamide resin contains 100% terminal amino groups, and further teaches the vulcanization-auxiliary polyamide oligomer is made from the same material, Ikuta teaches the

polyamide oligomer contains 100% terminal amino groups. That is, Ikuta teaches the oligomer has a plurality of primary amino groups in each molecule.

27. Regarding claims 10-11:

28. Ikuta teaches the polyamide oligomer should contain not less than 2 active hydrogen atoms, i.e., amino groups, per molecule. The examiner takes the position that Ikuta's oligomer inherently satisfies the presently claimed amino-group concentration because it is otherwise the same oligomer as presently claimed.

29. Regarding claim 12:

30. The polyamide oligomer comprises 0.5-20 pbw compared to 100 pbw of the resin [0110].

31. Regarding claim 14:

32. The rubber part includes polyester-based urethane elastomers and polyether-based urethane elastomers [0086].

33. Regarding claim 19:

34. There is no disclosure in Ikuta that the composite is for a shoe or roll. However, the recitation in the claims that the molded composite is "a shoe member or a roll member" is merely an intended use. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

35. It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. a composite used in a shoe or roll member, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure which is a composite identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

Response to Arguments

36. Applicant's arguments filed 2/22/2011 have been fully considered but they are not persuasive.

37. Regarding rejections under 35 USC 112:

38. The examiner appreciates Applicant's efforts to address issues raised under 35 USC 112. The previous rejections are withdrawn in light of Applicant's amendments.

39. Regarding rejections under 35 USC 102/103:

40. Applicant submits the required "vulcanized rubber of Ikuta '839 does not correspond to the thermoplastic polyurethane elastomer" presently claimed (p10). Applicant submits Ikuta only teaches bonding the thermoplastic resin and vulcanized rubber through vulcanization (p12-13).

41. The examiner submits Ikuta teaches a broader method disclosure than submitted by Applicant. Specifically, at paragraph [0144] Ikuta teaches "bonding the resin member to the unvulcanized rubber member" [emphasis added] by treating a surface of the thermoplastic resin member with a solvent and further contacting the surface with the unvulcanized rubber member. Since the elastomer is unvulcanized, it remains a thermoplastic.

42. Applicant submits the present invention achieves unexpected results and points to Table 2 of the specification as evidence of these results.

43. The examiner does not find the data persuasive. First, the examiner notes the data are not commensurate in scope with the claims: the examples show specific examples of specific polymers having amino group concentrations at specific values and shows the peel strength values of the a molded composite article with a specific thermoplastic polyurethane elastomer, whereas the present claims refer broadly to either any polyamide resin having a minimum amino group concentration or any of a group of resins having a polyamide oligomer attached to any thermoplastic polyurethane elastomer. Applicant has not shown, or fully explained, how the specific examples provide a sufficient basis to conclude that the unexpected results hold for the broad genus presently claimed.

44. Finally, the prior art, Ikuta, discloses polyamide resin and it is the examiner's position that the resin inherently has the amino group concentration presently claimed.

Conclusion

45. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 9:00-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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